CENTRAL Life Sciences®
Central Garden & Pet Company

March 2, 2012

Re: Testimony on HB 5260, "AN ACT RESTRICTING THE USE OF CERTAIN CHEMICALS THAT ARE HARMFUL TO JUVENILE LOBSERS"

Provided by Maija Mizens, Ph.D., DABT, Director of Toxicology, Central Life Sciences to Environment Committee

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Good morning Senator Meyer, Representative Roy, Senator Roraback, Representative Chapin and Members of the Environment Committee:

I am here today to address the misperception that methoprene is a factor in the lobster die-off in the waters of Long Island Sound.

Methoprene toxicity to Lobsters

Review of the literature on methoprene toxicity to lobsters emphasizes the fact that there are conflicting data reported in laboratory studies. One researcher reports deaths in Stage II larvae at concentrations as low as 1 ppb when continuously exposed for three days; another showed no effects at 10 ppb for two day; and a third reported no effects on lobster larvae at concentrations up to 100 ppb.

But, the fact that experts do agree on is that environmental conditions and disease are responsible for the decline in the lobster population in Long Island Sound (LIS). After the events of the Fall of 1999 researchers and government agencies came together under the oversight of the Atlantic States Marine Fisheries Commission to conduct a comprehensive research initiative investigating the lobster mortality event. The research concluded that unusually high water temperatures and disease, not methoprene, were mainly responsible for the lobster die-off.

Methoprene in the Aquatic Environment

The methoprene concentrations tested in the laboratory studies were identified as being representative of "environmental concentrations". How do the methoprene concentrations used in the laboratory studies compare to methoprene concentrations actually found in the environment? Several independent sources show that actual environmental concentrations are below the lowest concentration reported in the literature to cause adverse effects on lobsters:

> Extensive studies were done for Suffolk County NY by scientists at the State University of NY at Stony Brook. As part of the investigations looking at the effects of methoprene on non-target species, sediment concentrations of methoprene were measured. All methoprene concentrations were below 1 ppb,

except for some samples immediately after application. In reference to lobsters, the conclusion was that the lowest concentration to impact lobsters when exposed to methoprene for days were recorded only for a short period of time immediately after application. These investigations were conducted by applying Altosid directly to surface waters in Long Island Sound and not from a catch basin application.

Monitoring studies conducted by government agencies and academic researchers show that methoprene when detected is confined to the local treatment area. In the Ontario Hamilton area, the Canadian government conducted a three-year study to monitor methoprene concentrations in the waters surrounding areas where methoprene based mosquito control programs was implemented. Samples were taken from catch basins and receiving waters (streams, rivers and harbors) immediately after storm events from 2003 to 2005. Extremely low concentrations of methoprene were detected in only 2 of 51 samples over the three-year period in the receiving waters. In Hamilton Harbor, no methoprene was found.

Monitoring the surface waters of Long Island Sound (LIS) as part of the NY Sea Grant's Lobster Research Initiative showed no methoprene in LIS in 2003 when it was actively used in storm drains surrounding the Western Sound.

From these studies it can be concluded that it is highly unlikely that any of the limited amounts of methoprene used in CT and RI for mosquito control would make its way into LIS, especially at concentrations that have been identified as causing adverse effects in lobsters.

From another vantage point, if methoprene product was applied directly to LIS, it would take approximately 1650 tons of methoprene product to achieve a concentration of 1 ppb, the lowest concentration reported to affect lobsters. This is approximately $110 million of finished product, far in excess of any methoprene products used by the communities surrounding Long Island Sound. For example approximate 2 tons of finished product is sold per year in CT and Rhode Island, combined.

In summary, published literature reports that methoprene may have adverse effects on lobsters at concentrations as low as 1 ppb in laboratory studies. However, methoprene monitoring and research data from catch basin applications show that very little or no methoprene is found outside of the immediate treatment areas and that even within the treated areas, methoprene concentrations that are reported to be toxic to lobsters are not achieved.